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BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

Arizona Corporation Commission

DOCKETED

APR 28 2008

DOCKETED BY [Signature]

IN THE MATTER OF THE APPLICATION
OF ARIZONA PUBLIC SERVICE
COMPANY FOR APPROVAL OF
RENEWABLE ENERGY STANDARD
IMPLEMENTATION PLAN, DISTRIBUTED
ENERGY ADMINISTRATION PLAN,
CUSTOMER SELF-DIRECT RENEWABLE
RESOURCE TARIFF, AND RESET OF
RENEWABLE ENERGY ADJUSTOR

DOCKET NO. E-01345A-07-0468

DECISION NO. 70313

ORDER

Open Meeting
April 8 and 9, 2008
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Arizona Public Service Company ("APS" or "Company") is certificated to provide electric service as a public service corporation in the State of Arizona.

Background

2. On August 7, 2007, Arizona Public Service Company ("APS") filed its 2008 Renewable Energy Standard Implementation Plan ("The Implementation Plan"), its Distributed Energy Administration Plan ("DEAP"), its Customer Self-Directed Renewable Resource Tariff, and its Reset of the APS Renewable Energy Adjustor. This filing is in response to requirements in the certified Renewable Energy Standard and Tariff Rules ("REST Rules"). On August 30, 2007, APS filed an Amended Renewable Energy Standard Implementation Plan and an Amended Renewable Energy Standard Rate Schedule.

1 3. On December 17, 2007, APS and the Solar Advocates jointly proposed an
2 alternative Implementation Plan and funding mechanism.

3 4. On December 21, 2007, APS filed modified exhibits that reflected the changes that
4 would be required if the alternative Implementation Plan and funding mechanism were to be
5 approved by the Commission.

6 **The APS REST Implementation Plan 2008 to 2012**

7 5. The APS REST Implementation Plan 2008 to 2012 is a five-year plan describing
8 how APS intends to comply with the REST Rules requirements. In a separate document,
9 Attachment B of the APS application, APS has filed its Distributed Energy Administration Plan
10 (“DEAP”). The DEAP describes how APS intends to meet the annual Distributed Renewable
11 Energy Requirement.

12 6. APS estimates that the cost for full compliance with the REST Rules will total
13 \$48.2 million in 2008 and will increase to \$95.7 million by 2012, totaling \$347 million in the five-
14 year period.

15 7. The Plan describes the technologies considered and the expected schedule of
16 resource usage on a yearly basis for five years. The anticipated kilowatts (“kW”) and kilowatt
17 hours (“kWh”) that will be applied to meet REST requirements are calculated.

18 8. In Exhibit 1 of Attachment A, the APS REST Program Summary of the APS
19 application, APS outlines how it intends to meet its REST requirements. In 2008, APS expects to
20 have retail electricity sales of 29,496,411 MegaWatt-hours (“MWH”). When the annual 2008
21 REST requirement of 1.75 percent of retail sales is applied, the result is a renewable MWH
22 requirement of 516,187 MWH. Of this amount, 90 percent (464,568 MWH) will come from
23 renewable generation and 10 percent (51,619 MWH) will come from distributed energy resources.
24 APS projects that the renewable generation requirement will cost \$5.9 million to achieve and the
25 distributed energy requirement will cost \$42.3 million to achieve. The total program budget for
26 the APS REST program in 2008 is projected to be \$48.2 million.

27 9. In Exhibit 1 of the APS filing, APS indicates that it anticipates 102,000 MWh of
28 Green Power sales to customers in 2008, with gradual increases in those sales over the following

1 five years. However, APS states in a footnote that "Green Power sold to customers will not be
2 counted toward REST compliance and the cost of those resources is not included in the Renewable
3 Generation budget."

4 Renewable Generation

5 10. Currently, APS owns and operates approximately 6 MW of solar capacity. In
6 addition, APS has entered into power purchase agreements ("PPAs") totaling 114 MW of
7 renewable generation capacity. This totals 120 MW of generation capacity and is described in
8 detail in Exhibit 3B of Attachment A in the APS application.

9 11. The expected annual MWH of generation from existing contracts and planned
10 generation is shown in Exhibit 3A of Attachment A of the APS plan. The estimate for existing
11 renewable generation is 454,162 MWH in 2008, which will cover 97.7 percent of the renewable
12 generation target (464,568 MWH) that APS has set for 2008. So, an additional 10,407 MWH of
13 renewable generation would be needed to be procured in 2008 to meet the renewable generation
14 REST requirement.

15 Distributed Energy

16 12. In its Plan, APS has proposed an annual funding level that APS believes is
17 necessary for compliance with the annual Distributed Renewable Energy Requirement of the
18 REST Rules. The APS request is for a reset of its current EPS adjustor to cover only the 2008
19 estimate for the Distributed Renewable Energy Requirement. APS indicated that additional
20 increases in the adjustor will be required to meet the future increases in the Distributed Renewable
21 Energy Requirement.

22 13. APS participated in the meetings of the Uniform Credit Purchase Program
23 ("UCPP") Working Group in 2006 and 2007. APS has included the UCPP procedures and
24 incentives in its DEAP.

25 14. APS has developed a planning tool to estimate the Distributed Energy ("DE")
26 program outcomes. The assumptions used with this planning tool are included in Exhibit 4A of
27 Attachment A of the APS filing. The Distributed Energy Projected Program Outcomes are shown

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1 in Exhibit 4B of Attachment A of the APS filing. The Distributed Energy Projected Program
2 Outcomes by technology are in Exhibit 4C of Attachment A of the APS filing.

3 15. Incentives to encourage customers to install Distributed Energy Systems are
4 generally of two types: Up-Front Incentives (“UFI”) and Production-Based Incentives (“PBI”).
5 The incentives are used differently depending upon the type of customer.

6 16. Incentives for residential customers are for a one-time payment based on the DE
7 system’s capacity and first-year estimated savings. For residential customers, this is a UFI.

8 17. For non-residential systems, projects with an incentive value of \$75,000 or less will
9 receive a one-time UFI incentive. Non-residential systems eligible for incentives greater than
10 \$75,000 will be offered a PBI incentive based on system energy output.

11 18. Projects that fall outside of the standard administrative, equipment, or incentive
12 requirements for DEAP projects will be considered “Market Driven Projects.” Customer Self-
13 Directed Projects are for those customers who pay REST Tariff funds of at least \$25,000 annually.
14 The “APS Adjustment Schedule SDR, Self-Directed Renewable Resources” was submitted as part
15 of this filing.

16 Renewable Technology Commercialization and Integration

17 19. APS requests a budget allocation to conduct various studies related to the
18 commercialization and integration of renewable resources. The studies may be conducted solely
19 by APS or in partnership with other organizations.

20 20. The following studies are currently funded by the EPS funding:

- 21 • Arizona Renewable Resource Study – Recently completed by Black and Veatch.
- 22 • APS Integration Study – Recently completed by APS.
- 23 • Joint Utility Market Study – Done together with SRP, TEP, and the Arizona
24 Cooperative Utilities.
- 25 • Concentrating Solar Power Project Studies – Done in conjunction with the Joint
26 Development Group.

27 21. To determine whether or not to fund new studies, APS will consider three areas:

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- 1 • Renewable technologies and available resources
- 2 • Transmission and system integration impacts
- 3 • Distribution system impacts

4 Costs of Program Implementation

5 22. APS has estimated, in Exhibit 2 of its application, that the cost to comply with the
6 REST Rules will range between \$48 million in 2008 and \$96 million in 2012, totaling \$347
7 million over five years.

8 23. APS is requesting adjustor funding of \$42 million for 2008. This amount, added to
9 the \$6 million already included in base rates, would total \$48 million, which is the amount that
10 APS believes it needs to meet the REST requirements.

11 **The APS Distributed Energy Administration Plan**

12 24. The REST Rules require that a portion of the annual renewable energy requirements
13 must come from DE systems. In its plan, APS proposes to use the approach and technology
14 requirements that were developed by the UCPP Working Group in 2006 and 2007. APS has
15 indicated that, if the Commission adopts UCPP requirements that are different than those
16 implemented in the DEAP plan, the APS plan may need to be amended.

17 25. The DEAP Plan, as submitted by APS in this filing, is intended by APS to meet the
18 requirements of the REST Rules in A.A.C. R14-2-1810.B, which requires that "...each Affected
19 Utility shall file a Uniform Credit Purchase Program for Commission review and approval."

20 26. The DEAP plan, as proposed, provides the details by which customers will obtain
21 incentives; the requirements associated with the selection, installation, and operation of the DE
22 systems; and the measurement of DE performance for compliance reporting and program
23 evaluation. The intent is to ensure consistency and uniformity in the administration of the APS DE
24 program. APS has indicated that this new program will require updating and revising the existing
25 APS DE incentive program, known as the Solar Partners Incentive Program.

26 27. There are three project categories in the DEAP program: Standardized Projects,
27 Market-Based projects and Customer Self-Directed projects.

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1 28. The DEAP program includes installation and equipment specifications that were
2 developed by the UCPP Working Group. Included are equipment qualifications and installation
3 guidance.

4 29. DE systems must be permitted with and inspected by the local authority that has
5 jurisdiction. APS will select a subset of DE systems for an APS DE program conformance
6 inspection.

7 30. The DEAP plan provides a review of the reservation process for incentives, an
8 extension and cancellation policy, and details of energy reporting program monitoring.

9 31. APS includes a request for a DE Review Panel for ongoing review and adjustments
10 of certain Plan elements. APS asks that the DE Review Panel be given "authority to expeditiously
11 adjust the Plan and program elements."

12 32. The DE Review Panel would be a five-member panel. The Panel will review
13 program elements, vote on suggested changes, and suggest to APS modifications to Plan elements.
14 Any changes would be promptly reported to the Commission. The Panel would include one
15 representative from the ACC Staff, three representatives from the distributed energy industry, and
16 one representative from APS. The industry and ACC Staff representative would be appointed by
17 the ACC Utilities Division Director. Representatives would serve two-year terms. A unanimous
18 vote on a subject would result in incorporation of the suggested change into the DEAP Plan.
19 Modifications not receiving a unanimous vote could be considered in the following year's REST
20 Implementation Plan.

21 33. As part of its REST Plan, APS includes in its budget over \$15 million for
22 Administration, Implementation, Marketing and Commercialization. This would include 48.3 full-
23 time APS employees. The majority of that budget (\$13.6 million) and the majority of the
24 employees (40.8) would be used in the Distributed Program.

25 Reset of APS Renewable Energy Adjustor

26 34. In its August 30, 2007 amended filing, APS filed a request to reset a previously-
27 authorized renewable energy adjustor mechanism. APS estimates that it will need the Adjustor to
28 collect \$42.2 million which, together with another \$6 million in base rates, would be needed, in

1 APS' opinion, to meet the REST requirements. This would result in an Adjustor rate of
2 \$0.004629/kWh, with monthly caps of \$1.85 for residential customers, \$68.78 for commercial and
3 industrial customers less than 3 MW, and \$206.33 for commercial and industrial customers greater
4 than 3 MW.

5 Adjustment Schedule SDR: Self-Directed Tariff

6 35. In its filing, APS included Adjustment Schedule SDR: Self-Directed Renewable
7 Resources. This tariff explains the eligibility and procedures necessary for a customer to receive
8 funding for self-directed projects, as allowed in A.A.C. R14-2-1809. The customer must notify
9 APS by March 31 of the "payment year" of its intent to apply for self-directed funding. In the
10 following year, the "funding year", APS would make available up to one-half of the system cost,
11 limited by the customer's RES related payments in the payment year.

12 Other Issues

13 36. APS, in its filing, requests clarification that the REST Rules are the standard that
14 applies to renewable energy issues for APS and that rulings that pertain to the former
15 Environmental Portfolio Standard ("EPS") Rules are no longer applicable and binding on APS.

16 37. In particular, APS requests clarification that the REST Rules have superseded the
17 EPS Rules and that the partial variance of the EPS Rule granted by the Commission in Decision
18 No. 66565 has been superseded. In that Decision, APS was granted a partial waiver to allow a
19 limited amount of renewable solar thermal energy that replaced natural gas usage to be eligible to
20 meet the EPS requirement.

21 38. APS also requests clarification that the renewable reporting requirements in the
22 REST Rules have replaced similar reporting requirements in other related dockets to include:

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1 2 3	Decision No. 58643 (June 1, 1994) Docket No. E-00000D-93-0052 Integrated Resource Planning	Database of renewable resources; three-year renewable resource action plans as part of IRP
4 5	Decision No. 59601 (April 24, 1996) Docket No. E-01345A-95-0491 APS Rate Reduction Agreement	Semi-annual Reports to Staff on DSM and Renewables
6 7	Decision No. 63354 (February 8, 2001) Docket No. E-01345A-01-0034 APS Application for Approval of Environmental Portfolio Surcharge EPS-1	APS must file annual report within 60 days of the end of the calendar year with details of surcharge funds collected and spent.
8 9	Decision No. 66565 (November 18, 2003) Docket No. E-01345A-03-0660 Variance to allow solar thermal to replace natural gas for the EPS	APS must file a report on all solar thermal installations made subject to the variance as part of EPS reporting requirements.

Comments by Stakeholders and Interested Parties

12 39. On August 13, 2007, comments were filed in the docket by Sunrise Energy
13 Alternatives, LLC of Dewey, Arizona. The comments concern remote power systems for off-grid
14 renewable systems and the APS requirements for metering of the systems. The commenter was
15 requesting more information from APS on the types of meter(s) required.

16 40. On August 30, 2007, Jaspar Energy, LLC filed comments related to Solar Energy
17 Enhanced Combustion Turbine ("SEECOT™") systems that may be installed in conjunction with
18 combined cycle power plants. Jaspar Energy commented that, in the most recent APS RFP, APS
19 excluded the use of APS' own assets. Jaspar Energy recommended that, in its final order related to
20 the APS REST Implementation Plan, the Commission permit APS to include such solar energy
21 systems at its own fossil fuel fired power plants, which would reduce the "air intake" temperatures
22 of the gas turbines, thereby adding generating capacity, while reducing fuel consumption, as well
23 as replacing the need to use inefficient gas "duct burners," thereby reducing the high cost of
24 peaking power.

25 41. On September 18, 2007, Western Resource Advocates and Interwest Energy
26 Alliance provided initial comments about the APS REST Implementation Plan. The comments
27 addressed only the resources used to meet the non-distributed portion of APS' RES requirements
28 over the period 2008 to 2012. Included was an analysis of the benefits of the non-distributed

1 renewable energy resources and the market conditions related to the APS resources. The
2 comments recognized that “many non-distributed renewable resources are cost competitive with
3 conventional generation.” The comments also recommended that the Commission “Accept APS’
4 plan for acquiring non-distributed resources.”

5 42. On September 26, 2007, joint comments were filed by the “Solar Advocates,”
6 which include The Annan Group, the Arizona Solar Energy Industries Association, the Greater
7 Tucson Coalition for Solar Energy, the Solar Alliance, and the Vote Solar Initiative. The primary
8 concern expressed in the comments was that “the goals of the RES can be achieved for less cost
9 than proposed by APS in their filing.” The comments agreed that the “incentives budget proposed
10 by APS appears reasonable and appropriate.” The group believes that savings can be made in the
11 overhead portion of the budget. They recommend that the 2008 overhead budget be limited to 10
12 percent of total costs. One alternative suggested was to collect the funds in base rates. The
13 comments noted that “Marketing is the largest part of the non-incentive budget in APS’ Plan,
14 representing 15 percent of the total proposed DE budget in 2008”. They questioned whether the
15 cost of the studies proposed by APS should be funded exclusively by the RES program. The
16 comments included examples of other states, including Colorado and California, where renewable
17 programs are operated with overhead costs less than 10 percent, and in the case of Colorado,
18 ranging from 3.8 percent to 6.1 percent in the years 2008-2016. In particular, the Solar Advocates
19 claim that the 32 percent overhead costs proposed by APS for distributed energy are excessive.

20 43. On October 16, 2007, Commissioner Mundell filed a letter in the docket requesting
21 that APS and the Solar Advocates work together to find a common solution.

22 44. On December 17, 2007, APS and the Solar Advocates filed a joint letter (the “Joint
23 Proposal”) in the docket. The letter included revised budget and funding mechanisms that
24 “permits APS to better synchronize program funding with expected residential distributed energy
25 (“DE”) customer participation.” The proposal includes a roll-over of uncommitted DE incentive
26 funds from 2007 and a reduction in the Marketing and Outreach budget. The alternative proposal
27 provides for full funding for the non-residential DE and Renewable Generation elements that are
28 included in the APS Implementation Plan. The new element of the proposal is designed to better

1 synchronize with residential DE customer demand. This would adjust the budget and establish a
2 two-step funding mechanism, beginning at the level of the sample tariff and increasing when
3 certain triggers are met.

4 45. In the new Joint Proposal, the Commercialization and Integration ("C&I") budget
5 remains as proposed by APS. Funding for Marketing and Outreach would be reduced by \$1.5
6 million to \$4.8 million in 2008.

7 46. Both parties agreed that missing the first year (2007) in the ramp-up of the RES
8 requirements will put a strain on both the utility and industry in meeting the 2008 requirements.
9 This will require an increase from around 500 installations per year to more than 7,000 annual
10 installations to meet the RES requirements.

11 47. The Joint Proposal requests authorization from the Commission for funding of
12 \$43.7 million in two steps. Step 1 would set funding consistent with the RES Sample Tariff at an
13 annualized level of \$36.9 million. Step 2 would be an automatic increase to an annualized level of
14 \$43.7 million, contingent upon certain triggers being met. The triggers would be one of two
15 events based on the pace of residential incentive requests:

- 16 1.) APS receives new 2008 residential incentive requests of more than \$13 million before
17 June 30, 2008 (or the mid-point of the remaining calendar year if ACC approval is
18 received after January 1, 2008) or,
- 19 2.) APS receives new 2008 residential incentive requests of more than \$17.5 million
20 before August 31, 2008 (or the two-third point of the remaining calendar year if ACC
21 approval is received after January 1, 2008).

22 48. If either of the triggers are met, the parties ask that the Commission authorize APS
23 to automatically increase the charges and caps contained in the RES Adjustment Schedule with
24 prior notice to the ACC, Staff, and interested stakeholders. The notice would be in the form of an
25 informational filing 30 days prior to the increase that would include documentation of the
26 residential incentive request level, the date of the increase, and the anticipated amount of
27 collections for the remainder of the year.

28 49. On December 21, 2007, APS filed a letter and documents to support the Joint
Proposal's alternative Implementation Plan, which was described in the joint December 17th letter.

1 Also in the filing were exhibits that were modified by the alternative Implementation Plan, to
2 include:

- 3 1.) Exhibit 2: 2008 APS RES Summary as Proposed,
- 4 2.) Exhibit 4B: 2008 APS Distributed Energy Projected Program outcomes,
- 5 3.) Exhibit 4C: 2008 APS Distributed Energy Projected Program Outcomes by
6 Technology,
- 7 4.) Amended (Step 1) Adjustment Schedule RES,
- 8 5.) Amended (Step 2) Adjustment Schedule RES, and
- 9 6.) Attachment C: APS/Solar Advocates Alternative Funding Collection Estimates.

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11 50. Under the Joint Proposal's alternative Implementation Plan, the budget would
12 change to:

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Exhibit 2: 2008 APS RES Budget Summary as Proposed (\$MM)

	Amended APS Plan Filed August 30, 2007	APS/Solar Advocates Alternative Plan		
		Revised Total	Step 1 Proposed Funding	Step 2 Additional Funding ¹
Renewable Generation:				
Energy Purchase	\$ 5.3	\$ 5.3	\$ 5.3	\$ --
Administration	0.7	0.7	0.7	--
Implementation	0.4	0.4	0.4	--
Commercialization & Integration	0.5	0.5	0.5	--
Renewable Generation - Subtotal	6.9	6.9	6.9	--
Estimated Green Power Revenue	(1.0)	(1.0)	(1.0)	--
Renewable Generation – RES	\$ 5.9	\$ 5.9	\$ 5.9	\$ --
Distributed Energy:				
Incentives	\$ 28.7	\$ 28.7	\$ 22.7	\$ 6.0
Customer Self-Directed	--	--	--	--
Administration	1.6	1.6	1.4	0.2
Implementation	5.2	5.2	4.6	0.6
Marketing & Outreach	6.3	4.8	4.8	--
Commercialization & Integration	0.5	0.5	0.5	--
Distributed Energy – Subtotal	\$ 42.3	\$ 40.8	\$ 34.0	\$ 6.8
NET TOTAL	\$ 48.2	\$ 46.7	\$ 39.9	\$ 6.8
2007 Estimated Incentive Roll- over ²		(3.0)	(3.0)	
TOTAL	\$ 48.2	\$43.7	\$ 36.9	\$ 6.8

51. In December 2007, APS estimated that the 2007 Estimated Incentive Roll-Over would be approximately \$3 million. The actual roll-over at the end of 2007 was \$3.5 million.

52. On February 22, 2008, SOLID Energy, Inc. ("SOLID") filed comments on the APS REST Plan. SOLID supports APS' request for clarification that the Partial Variance approved for APS in Decision No. 66565 is superseded by the REST Rules. SOLID expressed concern that

¹ Represents the annualized collection resulting from affecting Step 2 funding. Actual collection resulting from Step 2 will vary based on the month the increase is put in place.

² The Estimated Incentive Roll-over represents the anticipated unspent incentive dollars from 2007.

1 APS might wish to own and install systems under the DE portion of the RES. SOLID opposes the
2 voting mechanism in the proposed DE Review Panel. SOLID disagrees with the Credit Purchase
3 Agreement, Contractor Qualification, Participant Delinquency, Allocation Method, Incentive Cap
4 for Dealers and Manufacturers, Default Procedures, and Market-Based Projects sections of the
5 Plan. SOLID requests a second phase of UCPP Working Group meetings.

6 Staff Response to Comments by Stakeholders and Interested Parties

7 53. Staff agrees with Sunrise Energy Alternatives, LLC that APS should clarify the
8 details of metering for renewable systems, particularly for remote, stand-alone systems.

9 54. Staff agrees with Jaspas Energy, LLC that APS should be allowed to install "solar
10 assist" systems in conjunction with combined cycle power plants owned by APS. In particular,
11 solar systems that reduce the need to run inefficient gas "duct burners" should be encouraged as a
12 way to reduce the high cost of peaking power.

13 55. Staff agrees with Western Resource Advocates and Interwest Energy Alliance that
14 the APS plan for acquiring non-distributed resources should be approved by the Commission.

15 56. Staff agrees with the Solar Advocates that APS' proposed overhead costs, as a
16 percentage of total program costs, are extremely high, particularly for the Distributed Energy
17 effort.

18 57. Staff agrees with SOLID on the clarification that the Partial Waiver in Decision No.
19 66565 is superseded by the REST Rules. Staff also agrees with SOLID that the DE Review Panel
20 idea has some flaws. Staff disagrees with SOLID that its recommended changes to the APS REST
21 Implementation Plan need to be made in 2008. Staff recommends that APS review SOLID's
22 comments and consider appropriate changes for the filing of the APS 2009 REST Implementation
23 Plan.

24 Staff Response to the Joint Proposal from APS and the Solar Advocates

25 58. Staff has reviewed the Joint Proposal provided by APS and the Solar Advocates.
26 Staff notes that APS was unable to find enough customers to utilize \$3.5 million in 2007 EPS
27 incentive funding. This fact clearly indicates that APS will find it nearly impossible to expend

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1 the \$22 - \$28.7 million in incentives for the REST Distributed Resources that are proposed in the
2 Joint Proposal.

3 59. The Joint Proposal is based upon the premise that the Commission would approve a
4 two-step process that would automatically reset the APS Renewable Energy Adjustor in Step 2.

5 60. Staff is concerned that such an automatic reset may raise legal issues. Staff is
6 further concerned that such a step may not be a sound policy for the Commission to institute.

7 61. Finally, Staff notes that the Commission will take action on the APS 2008 REST
8 Plan at a point where the first quarter of the plan year is already completed. The next REST plan
9 for APS must be filed by July 1, 2008. This 2009 REST Plan filing will offer an opportunity for
10 APS to request and receive modifications to the APS Renewable Energy Adjustor in the Fall of
11 2008 as the Commission considers approval of the 2009 REST Plan.

12 62. For these reasons, Staff recommends that the Commission reject the Joint Proposal
13 of APS and the Solar Advocates.

14 **Staff Analysis of the APS Implementation Plan**

15 63. Staff has analyzed the APS REST Implementation Plan, including its Distributed
16 Energy Implementation Plan, and its proposed tariffs.

17 The REST Implementation Plan

18 64. Staff finds that the Implementation Plan is a logical, well thought-out approach for
19 APS to meet its REST obligations. Although Staff may not agree with all the assumptions used by
20 APS in preparing its plan, Staff believes that the approach proposed by APS is consistent with the
21 steps that Staff believes are necessary to expand the use of renewables by APS and its customers.

22 65. Staff disagrees with APS that Green Power Sales under Rate Schedules GPS-1 and
23 GPS-2 should not be counted toward the REST requirements. The Environmental Portfolio
24 Standard encouraged such green pricing efforts by offering extra credits for such programs. Staff
25 recommends that the Commission direct APS to count Green Power Sales toward REST
26 requirements.

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1 The Distributed Energy Administration Plan

2 66. Staff agrees with most of the details of the DEAP plan. Staff believes that the
3 procedures, policies, program requirements, installation and equipment specification, and incentive
4 types and incentive levels are reasonable and should contribute to a fair and orderly process to
5 encourage distributed energy systems at customer premises.

6 67. Staff disagrees, however, with one provision in Section 4.2 of the DEAP plan. It
7 states: "A DE system purchased more than 180 days before the date that APS receives the
8 reservation request will not be considered 'new' under this Plan." Staff believes that this
9 requirement is logical, primarily for the years 2009 and after.

10 68. Staff has reviewed the APS proposal to establish a "DE Review Panel," which, if
11 approved as proposed, would have broad authority "to expeditiously adjust the Plan and program
12 elements." Staff notes that this concept is similar to one that was discussed in the Uniform Credit
13 Purchase Program meetings.

14 69. Staff believes that, once all outstanding 2008 REST Plans and Tariffs are addressed
15 by the Commission, work on the Uniform Credit Purchase Program will recommence. Staff
16 believes that the issue of review panels such as those proposed by the UCPP Working Group and
17 by APS are more appropriately addressed in the UCPP process. Therefore, at this time, Staff
18 recommends that APS' request to establish a DE Review Panel be denied. In the future, if no such
19 panel is established under the UCPP effort, APS may elect to recommend such a panel in future
20 REST Implementation Plans.

21 Fair Value Determination of REST Tariff

22 70. Staff has analyzed APS' application in terms of whether there are fair value
23 implications. In Decision No. 69663, issued on June 28, 2007, the Commission determined the
24 Fair Value of APS' rate base to be \$6,057,554,000. The proposed REST Tariff would have no
25 impact on the Company's revenue, fair value rate base or rate of return. Additionally, because
26 plant developed pursuant to the REST programs is not added to rate base, there will be no
27 corresponding effect on APS' ultimate revenue or rate of return. APS has assigned specific
28 numerical codes in its accounting system for the plant, revenue and expenses associated with

1 REST implementation to ensure that these items are properly accounted for and in order to
2 accurately prepare the required annual report for this program.

3 Staff's Development of Two Options for Commission Consideration

4 71. Staff notes that, by the time the Commission is able to take action on the APS
5 REST Plan, three months of 2008 will have elapsed. According to the REST Rules, APS would
6 only be responsible to meet the portion of the annual REST Requirement from the date of funding
7 approval. Therefore, Staff calculates that, at most, the Commission should only consider
8 approving a funding level for 2008 that is 75 percent of the total requested by APS in its filing,
9 since one quarter will have already passed prior to approval.

10 72. Staff's review of the APS request shows that an extremely large percentage (over
11 31 percent) of the total funds requested will be used by APS for Administration, Implementation,
12 Marketing, Outreach, Commercialization and Integration. Staff agrees with some of the
13 stakeholders who have argued that this percentage is extremely high. Staff recommends that
14 funding for Administration, Implementation, Marketing, Outreach, Commercialization and
15 Integration be reduced under either option proposed by Staff.

16 73. Staff has proposed two possible options for the Commission to consider. The first
17 option, Option A, would pro-rate the funding and REST requirements for 2008, based on the
18 Commission's approval date of the APS REST Implementation Plan Filing and reset of the APS
19 Renewable Energy Adjustor, as required in A.A.C. R14-2-1804.B. Option A would address the
20 fact that the 2008 budget and plan will be approved after the year has commenced.

21 74. Option B offers the Commission a completely different approach, relaxing the
22 allocation of the Distributed Renewable Energy Requirement in 2008, but creating a six-year
23 ramp-up to the desired residential/non-residential 50 percent split in 2013.

24 Staff Proposed Option A:

25 75. From its review of the APS proposed budget, Staff finds that the Administration,
26 Implementation, Marketing, Outreach, Commercialization and Integration budget allocations are
27 extremely high compared to actual funds used to encourage distributed projects or to purchase
28 renewable kWh from third parties. Although Staff understands that start-up funding in the first

1 year of a program may be, of necessity, much higher than normal, Staff believes that the totals
 2 requested for Administration, Implementation, Marketing, Outreach, Commercialization and
 3 Integration are excessive.

4 76. For the 2008 Implementation Plan, Staff recommends a reduction of \$4.2 million of
 5 those non-project costs. That would reduce the APS budget from \$48.2 million to \$44 million.
 6 Next, since one quarter of year 2008 is already completed and the APS Annual Renewable Energy
 7 Requirement will be only 75 percent of the Annual Requirement used to establish the APS REST
 8 Implementation Plan, Staff recommends that only 75 percent of the remaining \$44 million be
 9 authorized for the APS Implementation Plan. That would be a total of \$33 million.

10 77. Staff proposes, in Option A, that APS use the following sources of funds for the
 11 2008 budget of \$33 million:

12	EPS Funds rolled over from 2007	\$ 3,500,000
13	Renewable Funding in Base Rates	6,000,000
14	Estimated Green Power Revenue	1,000,000
15	Reset of Adjustor to Collect \$30 million	
16	annually (or \$22.5 million in 9 months	
17	April – December 2008)	<u>22,500,000</u>
		\$33,000,000

18
 19 78. APS has not formally proposed a \$30 million reset for the Adjustor. Staff inquired
 20 of APS in various data requests how it would fund a REST program at various levels of funding to
 21 include: \$27 million, \$30 million, \$33 million, \$36 million and \$42.2 million (the original APS
 22 request).

23 79. In order to collect the REST funding at the \$30 million per year rate, the APS
 24 Adjustor rate would need to be \$0.003288 per kWh, with monthly caps of \$1.32 for residential
 25 customers, \$48.84 for commercial and industrial customers less than 3 MW, and \$146.53 for
 26 customers greater than 3 MW.

27 80. APS estimates that the average monthly REST bill for residential customers would
 28 be \$1.19 and that 78.9 percent of residential customers would reach the \$1.32 monthly cap. The

1 average monthly REST bill for small general service customers would be \$4.47, and only 9.2
2 percent of the small general service customers would reach the \$48.84 monthly cap.

3 Staff's Proposed Option B: The Modified Distributed Renewable Energy Requirement

4 81. When the Commission developed and adopted the Distributed Renewable Energy
5 Requirement, it recognized that a goal of 30 percent of the portfolio dedicated exclusively to
6 distributed renewable energy systems was an ideal way to broaden the development of renewable
7 technologies in Arizona. The Commission also realized that it was prudent to achieve that goal
8 slowly by starting with 5 percent as a distributed requirement and slowly ramping up the
9 requirement to the desired 30 percent over a six-year period.

10 82. At the same time, the Commission determined that a reasonable mixture of system
11 types would require one-half of the Distributed Renewable Energy Requirement from residential
12 applications and one-half of the requirement from non-residential, non-utility applications. The
13 REST Rules also allow for a Wholesale Distributed Generation Component that can meet up to 10
14 percent of the annual DRE requirement from non-utility owned generators that sell electricity at
15 wholesale to Affected Utilities.

16 83. Unfortunately, at the time the REST Rules were being developed, no consideration
17 was given to the possibility of ramping-up the residential and non-residential requirements slowly
18 over a number of years. Similarly, no consideration was given to increasing the Wholesale
19 Distributed Generation Component to a percentage greater than 10 percent.

20 The Residential Incentive Challenge

21 84. The biggest problem facing the utilities in the implementation of their REST Plans
22 is the extremely high cost of providing incentives to residential customers that are substantial
23 enough to encourage thousands of customers to opt for renewable energy systems. To date, the
24 best way to encourage residential customers has been to offer an up-front incentive which covers
25 up to one-half of the system's installed cost.

26 85. Although this UFI has been successful, it is a very costly way to provide large
27 numbers of residential installations. The effect is to pay for 30 years of renewable kWh energy

28 ...

1 savings in the first year. This means that the first year's cost to the utilities (up to half the system
2 installed cost) is extremely large, followed by 29 or more years of no cost to the utility.

3 86. It is this residential incentive which dominates the APS budget in its proposed
4 implementation plan. APS proposes \$26.055 million in incentives to reach the residential target of
5 5 percent of the annual REST requirement. Although APS has not broken down its
6 Administration, Implementation, Marketing & Outreach, and Commercialization and Integration
7 costs by residential and non-residential customers, Staff estimates that from 60-75 percent of those
8 costs will be allocated to meeting the residential requirement. So, for an APS-proposed total of
9 \$13.6 million for Administration, Implementation, Marketing & Outreach, and Commercialization
10 and Integration, approximately \$8-10 million will be for residential applications. Combined with
11 the proposed \$26.055 million for residential incentives, the impact of residential system programs
12 will consume from \$34-36 million of the proposed 2008 APS budget of \$48.2 million.

13 Staff's Proposed Solution to the Residential Incentive Challenge

14 87. One reason that the residential incentive problem is so large is that the REST Rules
15 require that 50 percent of the Distributed Renewable Energy Requirement set forth in A.A.C. R14-
16 2-1805 must come from residential customers. The rule, however, does not provide a "ramp up"
17 period for this requirement.

18 88. Staff had recommended that both the overall Annual Renewable Energy
19 Requirement and the Distributed Renewable Energy Requirement be ramped up slowly in order to
20 allow the utilities and the renewable energy industry to gradually expand their efforts to meet the
21 annual increases in both requirements. A similar gradual ramp-up for the residential and non-
22 residential set-asides in the Distributed Renewable Energy Requirement was not considered.

23 89. The dilemma is compounded by the fact that the REST Rulemaking process took
24 much longer to complete than originally anticipated. In January 2004, when the REST process
25 started, it was anticipated that the REST Rules would be adopted by late 2005 or early 2006. That
26 is why the first REST Annual Renewable Energy Requirement was set for 2006.

27 90. Unfortunately, no REST Plans were implemented in either 2006 or 2007, but the
28 annual REST requirements continued to grow each year. The effect of this delay is that, in 2008,

1 the utilities must play “catch-up” for the missed 2006 and 2007 calendar year requirements,
2 making it even more difficult for them to bridge the large gap from the older EPS requirements to
3 the newer, and much larger, REST requirements.

4 91. During the REST Rules process, it became clear that, in the future, the Commission
5 may need to “tweak” or adjust the REST process as conditions change. The Implementation Plan
6 review process provides an opportunity for such adjustments.

7 92. Staff recommends that no changes be made to the overall Annual Distributed
8 Renewable Energy Requirement. The ramp-up, as defined in the Rules, would continue as
9 specified.

10 93. Staff believes that, if the Commission were to gradually increase the residential and
11 non-residential requirements to the desired 50 percent split, and allow, in the next five years, a
12 larger percentage for the Wholesale Distributed Generation Component, the need for large funding
13 increases in the early years of the REST Rules would be greatly reduced. A gradual ramp-up
14 would allow customer markets to grow at a reasonable rate and allow the renewable industry to
15 expand gradually to meet the slower growth.

16 94. Staff recommends that the Commission approve for APS a six-year ramp-up of the
17 allocation of the annual Distributed Renewable Energy Requirement. In 2008, APS would be
18 required to provide a minimum of 25 percent of the requirement from residential customers and 25
19 percent of the requirement from non-residential customers. In addition, Staff recommends that the
20 allocation for kWh from the Wholesale Distributed Generation Component, authorized by A.A.C.
21 R14-2-1805.E, be allowed to provide up to 50 percent of the requirement in the first two ramp-up
22 years. Staff’s proposed ramp-up recommendation is:

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Staff's Proposal for a Modified Distributed Renewable Energy Requirement

Current DR Requirement		Allocation of the DRE Requirement		
<u>Year</u>	D.R. %	Residential (Customer-Sited)	Non-Residential (Customer Sited)	Wholesale Distributed Generation Component*
2008	10%	Minimum 25%	Minimum 25%	Up to 50%
2009	15%	Minimum 25%	Minimum 25%	Up to 50%
2010	20%	Minimum 30%	Minimum 30%	Up to 40%
2011	25%	Minimum 35%	Minimum 35%	Up to 30%
2012	30%	Minimum 40%	Minimum 40%	Up to 20%
2013 and after	30%	50%	50%	Up to 10%

*Note: The Wholesale Distributed Generation component counts as part of the Non-Residential component only.

95. If the Commission accepts the premise of Staff's Proposed Option B, that a gradual ramp-up of the allocation of the Distributed Renewable Energy Requirement is in the best interests of all parties, there can be a significant reduction in the funding required to meet the REST Rules in the early years.

96. For instance, if the residential allocation for 2008 is 25 percent rather than 50 percent of the Distributed requirement, APS would only need \$13 million for residential incentives rather than its proposed \$26.055 million. Similarly, since the Administration, Implementation, Marketing, Outreach, and Commercialization and Integration costs are primarily driven by numbers of installed distributed systems, the cost of these proposed programs should also be cut in half or more, from APS' proposed \$13,555,150 for the distributed systems to less than \$5,000,000.

97. Staff has reviewed the APS REST Plan and believes that, as adjusted in Staff's Proposed Option B, APS should be able to meet the REST Requirements for 2008, for a cost of \$30,750,000. This would include an Administration, Implementation, Marketing, Outreach, and Commercialization and Integration budget of no more than \$5.9 million, which is less than 20 percent of the total APS funding.

98. In order to collect the REST funding at the \$27 million per year rate, the APS Adjustor rate would need to be \$0.002962 per kWh, with monthly caps of \$1.18 for residential

...

1 customers, \$44.01 for commercial and industrial customers less than 3 MW, and \$132.04 for
2 customers greater than 3 MW.

3 99. APS estimates that the average monthly REST bill for residential customers would
4 be \$1.07 and that 78.9 percent of residential customers would reach the \$1.18 monthly cap. The
5 average monthly REST bill for small general service customers would be \$4.03, and only 9.2
6 percent of the small general service customers would reach the \$44.01 monthly cap.

7 100. Staff proposes, in Option B, that APS use the following sources of funds for the
8 2008 budget of \$30.75 million:

9	EPS Funds rolled over from 2007	\$ 3,500,000
10	Renewable Funding in Base Rates	6,000,000
11	Estimated Green Power Revenue	1,000,000
12	Reset of Adjustor to Collect \$27 million	
13	annually (or \$20.25 million in 9 months	
14	April – December 2008)	<u>20,250,000</u>
		\$30,750,000

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Comparison of APS Proposed Budget to staff Option B Budget

APS REST Program Elements	APS Filing Proposed Funding	Option B Staff Proposed Funding
<u>Incentives (D.E.)</u>		
Residential (UFI)	\$26,055,000	\$13,000,000
Non-Residential (UFI)	\$ 661,000	\$ 1,550,000
(PBI)	\$ 979,000	\$ 3,000,000
Existing (PBI)	\$ 1,000,000	\$ 1,000,000
Wholesale Component	--	\$ 1,000,000
Subtotal	\$28,695,000	\$19,550,000
<u>Renewable Generation</u> kWh Purchase	\$ 5,300,000	\$ 5,300,000
<u>Administration, Implementation,</u> <u>Marketing, Outreach,</u> <u>Commercialization and</u> <u>Integration</u>	\$15,152,710	\$ 5,900,000
Total	\$49,147,771	\$30,750,000

101. Staff believes that Option B is a logical first-year step toward meeting the REST requirements. The gradual ramp-up of the allocation of the Distributed Renewable Energy Requirement will allow the renewable industry a reasonable time frame in which to expand the industry infrastructure required to provide the larger number of systems needed to meet the desired 50 percent residential set-aside.

However, the Commission disagrees with Staff regarding this recommendation, and believes that Option A represents the most accurate reflection of the Commission's REST Rules, and will be most likely to swiftly facilitate the implementation of the Standard. Option A also embodies a compromise position reached between APS and the Solar Advocates, crafted by the Parties following the letter issued by Commissioner Mundell on October 16, 2007. Therefore, we will adopt Option A.

1 Staff Analysis of Other Issues

2 102. Staff agrees with APS that the Order in this docket should clearly state that the
3 REST Rules are the appropriate standard that applies to renewable energy issues for APS and that
4 rulings pertaining to the former Environmental Portfolio Standard Rules are no longer binding on
5 APS.

6 103. Staff also agrees that the REST Rules have superseded the EPS rules and that the
7 partial variance granted by the Commission in Decision No. 66565 has been superseded.

8 104. Staff further agrees that renewable reporting requirements in the REST Rules have
9 replaced similar reporting requirements in Decision Nos. 58643, 59601, 63354, and 66565.

10 Synopsis of Filing and Staff Recommendations

11 105. Staff has prepared a synopsis of the APS filing that compares it to Staff Option A
12 and Staff Option B. Staff has recommended that the Commission approve Staff Option B as the
13 best available alternative.

	<u>APS Filing</u>	<u>Staff Option A</u>	<u>Staff Option B</u>
14 Proposed Budget	\$48.20 million	\$33.00 million	\$30.75 million
15 Annual Adjustor Target	\$42.2 million	\$30.00 million	\$27.00 million
16 Adjustor	\$0.004629 per kWh	\$0.003288 per kWh	\$0.002962 per kWh
17 Residential Cap	\$1.85	\$1.32	\$1.18
18 Small Comm. Cap	\$68.78	\$48.84	\$44.01
19 Large Customer Cap	\$206.33	\$146.53	\$132.01

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21
22 106. Staff has recommended that the Commission order APS to modify its Distributed
23 Energy Administration Plan, as recommended in the Staff Report, to allow eligible systems
24 installed as early as January 1, 2004, to be defined as "new" systems for funding.

25 107. Staff has recommended that the Commission deny APS' request to establish a "DE
26 Review Panel" as proposed in the Distributed Energy Administration Plan.

27 108. Staff has recommended that the Commission order APS to count Green Power
28 Sales under Rate Schedules GPS-1 and GPS-2 toward meeting the REST requirements.

1 However, the Commission disagrees with Staff and believes that the Green Power program
2 was designed to be separate from the REST, and that Sales related to these rate schedules should
3 not be counted toward meeting the REST requirements.

4 109. Staff has recommended that the Commission waive the 50 percent allocation of the
5 Distributed Renewable Energy Requirement in R14-2-1805.D and the 10 percent limit on the
6 Wholesale Distributed Generation Component in R14-2-1805.E for APS, and replace the
7 requirements with Staff's proposed modified Distributed Renewable Energy Requirement, as
8 described herein.

9 110. Staff has recommended that the 2008 APS REST Implementation Plan, as modified
10 by Staff's recommendations, be approved.

11 111. Staff has recommended that the 2008 annual budget for the APS REST
12 Implementation Plan be set at \$30,750,000.

13 112. Staff has recommended that the APS Renewable Energy Adjustor be reset to a rate
14 of \$0.002962 per kWh, with monthly caps of \$1.18 for residential customers, \$44.01 for
15 commercial and industrial customers less than 3 MW, and \$132.04 for customers greater than 3
16 MW.

17 113. Staff has recommended that the Commission provide clarification in the Order that
18 the REST Rules have superseded the EPS rules for APS and that the partial variance to the EPS
19 Rules granted by the Commission in Decision No. 66565 has been superseded by the REST Rules.

20 114. Staff has recommended that the Commission order that the renewable reporting
21 requirements in the REST Rules have replaced similar reporting requirements in Decision Nos.
22 58643, 59601, 63354, and 66565.

23 115. Staff has recommended Commission approval of Adjustment Schedule SDR: Self-
24 Directed Renewable Resources.

25 116. In APS' response to Staff's Report and Recommended Order, APS requested
26 flexibility to reallocate incentive budgets to match customer demand in order to meet "both the
27 minimum targets for each category and the overall distributed energy requirement." We agree that
28 ...

1 APS should be allowed flexibility to reallocate up to 20 percent of incentive funds in the
2 distributed energy budget in order to match customer demand.

3 CONCLUSIONS OF LAW

4 1. APS is a public service corporation within the meaning of Article XV, Section 2 of
5 the Arizona Constitution.

6 2. The Commission has jurisdiction over APS and over the subject matter of the
7 Application.

8 3. The Commission, having reviewed the application and Staff's Memorandum dated
9 February 29, 2008, concludes that it is in the public interest to approve the APS REST
10 Implementation Plan as modified by Staff's recommendations, approve the APS Adjustment
11 Schedule RES as modified by Staff's recommendations, and approve APS Adjustment Schedule
12 SDR: Self-Directed Renewable Resources.

13 ORDER

14 IT IS FURTHER ORDERED that the Arizona Public Service Company 2008 REST
15 Implementation Plan, as modified by Staff's recommendations, is approved except that we will
16 require Arizona Public Service Company to implement Option A, as described herein.

17 IT IS FURTHER ORDERED that the 2008 annual budget for the Arizona Public Service
18 Company REST Implementation Plan shall be set at \$33,000,000.

19 IT IS FURTHER ORDERED that the Arizona Public Service Company Renewable Energy
20 Adjustor be reset to a rate of \$0.003288 per kWh, with monthly caps of \$1.32 for residential
21 customers, \$48.84 for non-residential customers less than 3 MW, and \$146.53 for non-residential
22 customers equal or greater than 3 MW.

23 IT IS FURTHER ORDERED that Arizona Public Service Company be allowed flexibility
24 to reallocate up to 20 percent of the funds in its 2008 distributed energy incentive budget to match
25 customer demand.

26 IT IS FURTHER ORDERED that the Arizona Public Service Company Adjustment
27 Schedule SDR: Self-Directed Renewable Resources is hereby approved.

28 ...

1 IT IS FURTHER ORDERED that Arizona Public Service Company's request to establish a
2 DE Review Panel is denied.

3 IT IS FURTHER ORDERED that Arizona Public Service Company shall not count Green
4 Power Sales toward meeting REST requirements.

5 IT IS FURTHER ORDERED that the Arizona Public Service Company 2008 REST
6 Implementation Plan shall remain in effect until further order of the Commission.

7 IT IS FURTHER ORDERED that for Arizona Public Service Company the Renewable
8 Energy Standard Rules (A.A.C. R14-2-1801 through -1816) supersede the Environmental Portfolio
9 Standard Rules (A.A.C. R14-2-1618) and any other reporting requirements related to renewable
10 energy resources.

11 IT IS FURTHER ORDERED that, since the REST Rules supersede the EPS Rules, the
12 partial variance granted to Arizona Public Service Company by the Commission in Decision No.
13 66565 has been superseded and replaced by the REST Rules.

14 IT IS FURTHER ORDERED that all monies collected by Arizona Public Service
15 Company under the EPS Adjustor mechanism for the current EPS program shall be transferred to
16 the REST Program.

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1 IT IS FURTHER ORDERED that APS file with Docket Control, as a compliance matter in
2 this docket, the tariff schedules as approved herein within 15 days of the effective date of this
3 decision.

4 IT IS FURTHER ORDERED that this Decision shall become effective immediately.

6 BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

7
8 *Laurel Bloom*
CHAIRMAN

William Q. Wankel
COMMISSIONER

9
10 *Stephen H. Haddad*
COMMISSIONER

R. W. [unclear]
COMMISSIONER

COMMISSIONER

12 IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive
13 Director of the Arizona Corporation Commission, have
14 hereunto, set my hand and caused the official seal of this
15 Commission to be affixed at the Capitol, in the City of
16 Phoenix, this 28th day of April, 2008.

17 *Brian C. McNeil*
BRIAN C. McNEIL
Executive Director

18
19 DISSENT: *Gary [unclear]*

20
21 DISSENT: _____

22 EGJ:RTW:lhmlJFW

1 Commissioner Pierce *dissenting*:

2 I dissent from the Commission's approval of Staff's Option A REST
3 Implementation plan. The Commission should have approved Staff's Option B Plan,
4 which would have provided the same amount of renewable energy and the same amount
5 of distributed generation for more than two million dollars less than Staff's Option A
6 Plan. Aside from the cost savings entailed in Staff's Option B Plan, the primary
7 difference between the two plans is that the Option B Plan relaxes the requirement found
8 in A.A.C. R14-1805.D that 50% of distributed generation come from residential rooftops
9 and 50% come from commercial rooftops. Because there is no public policy basis for
10 distinguishing between residential DG and commercial DG, I cannot support Staff's
11 Option A Plan.

12 The cost of residential DG¹ is staggering. Staff's Option A Plan costs \$33 million.
13 Eighty-seven percent of that cost—\$28.6 million—is for residential and commercial DG.
14 Of that number, approximately ninety percent—\$25.7 million—is for residential DG. In
15 other words, more than three-fourths of the cost of Staff's Option A Plan is for residential
16 DG, which will produce less than 5% of APS's renewable energy in 2008. A stubborn
17 insistence by this Commission that 50% of DG come from residential facilities is an
18 albatross around the neck of our REST rules.

19 Given the negative externalities associated with generating electricity using fossil
20 fuels, I believe the Commission is justified in requiring utilities to acquire a portion of

21 _____
22 ¹ It is difficult to make an apples-to-apples comparison of the cost of residential DG with
23 the cost of commercial DG because residential facilities receive an up-front incentive,
24 whereas commercial facilities receive a performance-based incentive. This results in
25 residential DG looking relatively more expensive in early years than commercial DG. It
26 also results in the risk of underperformance of the facility being shifted from residential
customers to all ratepayers. There is no doubt, however, that residential DG is more
expensive than commercial DG; the very reason residential customers receive an up-front
incentive is because, unlike commercial customers, they are difficult to entice with
performance-based incentives. The only uncertainty is the magnitude of the cost premium
of residential DG over commercial DG.

1 their electricity—at premium prices—from renewable and DG sources. We cannot afford,
2 however, to require utilities to pay super-premium prices for residential DG for no
3 discernable reason.

4 So far I have spoken only of the direct costs of residential DG, but I'm equally
5 concerned about the opportunity cost. In other words, what did the Commission give up
6 when it required APS to devote \$25.7 million towards residential DG in 2008? APS's
7 application indicates that APS can generate or purchase 464,568 MWh of renewable
8 energy for \$5.9 million. Assuming linear pricing, APS could more than quadruple the
9 amount of renewable energy it acquires in 2008 if the Commission would relax its
10 residential DG requirement. In other words, for the same cost, APS could have enjoyed
11 more than four times the amount of reductions in NO_x, SO_x, and Carbon Dioxide
12 emissions in 2008 than it will experience under Staff's Option A Plan.

13 Inquiring into the opportunity costs of requiring 50% of DG to come from
14 residential rooftops begs the question: what are we trying to achieve in our REST rules?
15 Are we trying to increase the number of DG facilities installed on residential rooftops, or
16 are we trying to promote and increase the use of renewable energy generally? The name
17 of the rules—i.e., the *Renewable Energy* Standard and Tariff—certainly suggests that their
18 purpose is to promote renewable energy generally, and that is certainly how the rules are
19 portrayed to and perceived by the general public. Given this, it occurs to me that there is a
20 certain amount of mislabeling associated with approving a REST implementation plan
21 that spends more money on installing residential DG than it does on generating and
22 acquiring renewable energy.

23 If the Commission continues to use the REST rules to prop up residential DG,² it
24 will sour me on the entire enterprise. I dissent.

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26 ² I hold no animus towards residential DG. I'd be happy to see residential DG flourish so
long as it does so on the same terms that are being offered to commercial DG customers.

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Note: Following are some tables and graphs that visually describe what I've tried to explain here.

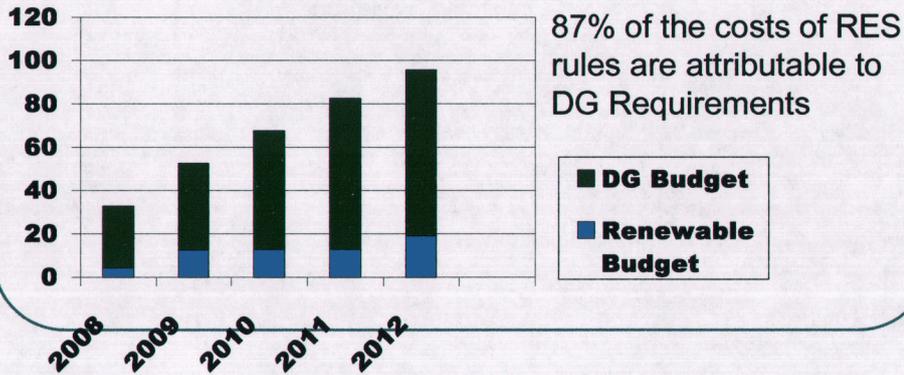
APS's REST Targets & Budget

	2008	2009	2010	2011	2012
TARGETS:					
Renewable Target	1.75%	2.00%	2.50%	3.00%	3.50%
DG Target	.175%	.3%	.5%	.75%	1.05%
BUDGET: (millions)					
Renewable Budget	\$4.4	\$12.6	\$12.8	\$12.8	\$19.0
DG Budget	\$28.6	\$39.9	\$55.0	\$70.1	\$76.7
Total Budget	\$33.0	\$52.5	\$67.8	\$82.9	\$95.7

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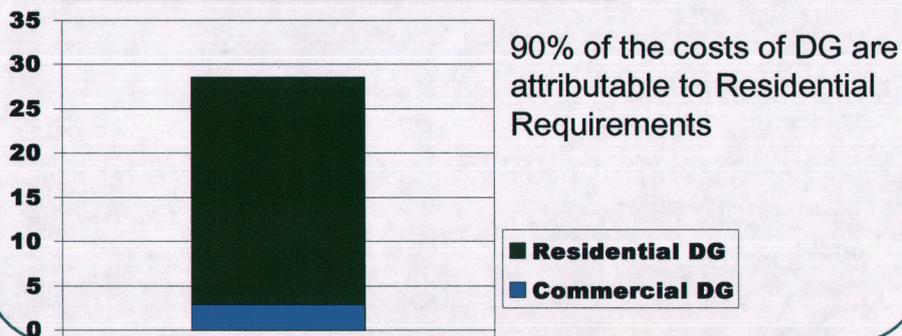
APS's Forecasted REST Costs

	2008	2009	2010	2011	2012
Total Cost (millions)	\$33.0	\$52.5	\$67.8	\$82.9	\$95.7
Renewable Cost	\$4.4	\$12.6	\$12.8	\$12.8	\$19.0
DG Cost	\$28.6	\$39.9	\$55.0	\$70.1	\$76.7



APS's 2008 DG Budget

Total 2008 DG Budget	\$28.6
Residential DG Component	\$25.7
Commercial DG Component	\$2.9



1	SERVICE LIST FOR: Arizona Public Service Company	
	DOCKET NO. E-01345A-07-0468	
2		
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4	84 Richards St.	Assistant Director
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	Union of Concerned Scientists	
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	Cambridge, Massachusetts 02238-9015	Executive Director
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24	2034 N. 13th St.	Diane Vosick
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